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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/721,015	11/22/2000	Douglas Wong	SOL-134	5163

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EXAMINER

DO, ANH HONG

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 04/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/721,015

Applicant(s)

WONG ET AL.

Examiner

ANH H DO

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1, 2, 5-9, 11, 14, 15, 18, 19, 27, and 28 are rejected under 35 U.S.C. 102(a) as being anticipated by the prior art described in the application (hereafter PAA).

Regarding claim 1, the PAA discloses:

- preprocessing data segments to provide at least first corresponding pre-processed segments 150 (i.e., packaged data U(0), U(1), ...) with embedded information representing first logical value U(i) 170, and second corresponding pre-processed segments 110 (i.e., content frames C(N-1)... C(1), C(0)) with information representing a second logical value C(i) that is different than said first logical value (Fig. 1);

- assembling particular ones of said pre-processed segments in accordance with a control signal inherently come from data embedding module 120 that designates the successive logical values 130, to provide a composite data signal 180 (Fig. 1).

Regarding claim 27, since this is an apparatus claim corresponding to method claim 1, the discussion of claim 1 applies hereto.

Regarding claim 28, the PAA discloses:

- a composite data signal portion 180;
- an information portion with successive logical values 130 provided in said composite data signal portion 180; wherein:

- said information portion represents first and second logical values $U(i)$ and $C(i)$;

- data segments are processed to provide at least first corresponding pre-processed segments 150 (i.e., packaged data $U(0)$, $U(1)$, ...) with embedded information representing first logical value $U(i)$ 170, and second corresponding pre-processed segments 110 (i.e., content frames $C(N-1)$... $C(1)$, $C(0)$) with information representing a second logical value $C(i)$ that is different than said first logical value (Fig. 1);

- particular ones of said pre-processed segments are assembled to provide a composite data signal portion 180 with successive logical values 130 in response to a control signal inherently come from data embedding module 120 designating the successive logical values 130 (Fig. 1).

Regarding claim 2, the PAA teaches said first and second logical values

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comprise binary bits (Fig. 1 shows data package module 140 for converting the data into binary user data bits).

Regarding claims 5-9, the PAA teaches said successive logical values 130 identify a source of said composite data signal 180, are provided cryptographically, and comprise digital and analog data (Fig. 1).

Regarding claim 11, the PAA teaches:

- said control signal is inherently provided from data embedding module 120 in accordance with a user request to retrieve said composite data signal 180 (Fig. 1);
- said successive logical values 130 identify the user (Fig. 1).

Regarding claim 14, the PAA teaches said successive logical values 130 identify a user to which the composite data signal 180 is provided (Fig. 1).

Regarding claim 15, the PAA teaches multiple layers of embedded information U(i) are provided in said composite data signal 180 (Fig. 1).

Regarding claim 18, the PAA teaches providing multi-level logical values, with $M > 2$ levels, in said composite data signal (Fig. 1: 180 and 130).

Regarding claim 19, the PAA teaches the second segments 110 (i.e., content frames) are pre-processed to provide embedded information for representing a second logical value C(i) (Fig. 1).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, 4, 10, 12, 13, 16, 17, and 20-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art described in the application (hereafter the PAA) in view of Rhoads (U.S. Patent No. 5,636,292).

Regarding claim 3, the PAA discloses:

- segments of the composite data signal 180 (Fig. 1);
- the embedded information U(i) in the composite data signal 180 (Fig. 1).

The PAA does not disclose expressly the segments of the composite data signal comprise audio data and the embedded information in the composite data signal is provided at a desired audibility level therein.

Rhoads discloses:

- the segments of the composite data signal comprise audio data and the embedded information in the composite data signal is provided at a desired audibility level therein (col. 30, lines 43-60, teaches an audio data signal and the embedded information is provided at a desired audibility level therein).

The PAA & Rhoads are combinable because they are from the embedding system.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use audio data and provide the embedded information at a desired audibility level in the PAA as taught by Rhoads.

The suggestion/motivation for doing so would have been to set the amplitude of the composite signal not to exceed the pre-set acceptable perceived noise level (col. 6, line 67 - col. 7, line 1).

Therefore, it would have been obvious to combine the PAA with Rhoads to obtain the invention as specified in claim 3.

Regarding claim 4, the PAA teaches said segments of the composite data signal 180 comprise video data (i.e., frames) and the embedded information U(i) in the composite signal 180 (Fig. 1).

The PAA does not teach expressly the embedded information in the composite data signal is provided at a desired visibility level therein.

Rhoads teaches the embedded information in the composite data signal is provided at a desired visibility level therein (col. 6, lines 54-65).

The PAA & Rhoads are combinable because they are from the embedding system.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use video data and provide the embedded information at a desired visibility level in the PAA as taught by Rhoads.

The suggestion/motivation for doing so would have been to set the amplitude of the composite signal not to exceed the pre-set acceptable perceived noise level (col. 6, line 67 - col. 7, line 1).

Therefore, it would have been obvious to combine the PAA with Rhoads to obtain the invention as specified in claim 4.

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Regarding claim 10, the PAA teaches:

- wherein said assembling step is responsive to said control signal implicitly come from data embedding module 120 for retrieving the particular ones of the segments to provide the composite data signal 180 (Fig. 1).

The PAA does not teach expressly storing said first and second segments in a storage device prior to said assembling step.

Rhoads teaches:

- storing said first and second segments in a storage device 214 prior to said assembling step (col. 22, lines 29-44).

The PAA & Rhoads are combinable because they are from the embedding system.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to employ the memory in Rhoads to store the first and second segments in the PAA.

The suggestion/motivation for doing so would have been to save memory space by storing only the key number for later use in decoding, instead of the large data set (col. 22, lines 51-54).

Therefore, it would have been obvious to combine the PAA with Rhoads to obtain the invention as specified in claim 10.

Regarding claims 12, 20, 21 and 23-26, Rhoads teaches:

- communicating the first and second segments from a distributor in a content-delivery network to at least one user terminal in the network, where the user terminal is located remotely from the distributor (col. 34, line 65 - col. 35, line 2);

- wherein said assembling step occurs at the user terminal after receipt of the first and second segments thereat (col. 35, lines 32-37).

The motivation to combine the PAA and Rhoads is set forth in the above discussions.

Regarding claim 13, Rhoads teaches:

- providing an associated identification value (i.e., N-bit identification word) to the user terminal (col. 35, lines 32-37);

- wherein the successive logical values are determined according to the identification value (col. 36, lines 58-67).

Regarding claims 16 and 17, Rhoads teaches a transition between the assembled segments is smoothed according to a transition function in said composite data signal (col. 32, lines 22-29).

Regarding claim 22, Rhoads teaches the data segments comprise compressed contents (col. 39, lines 3-5).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANH H DO whose telephone number is 703-308-6720. The examiner can normally be reached on 5/4-9.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID K MOORE can be reached on 703-308-7452. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 16, 2004.



ANH HONG DO
PRIMARY EXAMINER